

Halton FDS – Fire damper (E 60)



Overview

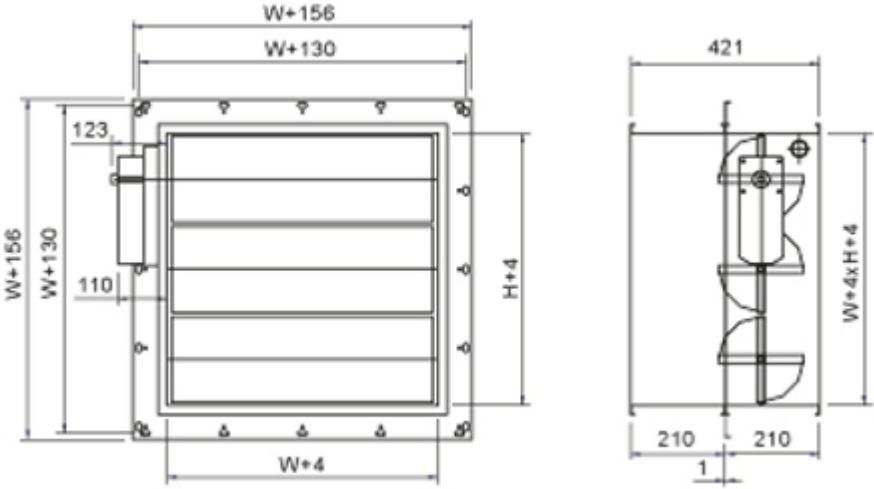
Terminated as of 1st May 2022

-> replaced with Halton Exe Light Rectangular (ELR)

- Possible to install in concrete, masonry or lightweight wall with fire resistance **E 90** (v_e) C 50 ; **E 60** ($v_e - h_o$) S C 50 ; **EI 15** (h_o) S C 50.
- Suitable for horizontal and vertical installation.
- Possible to install with blades horizontal and vertical position.
- Casing can be done longer if required.
- Circular connection version available.
- No spare parts or additional installation frames needed, regardless from the wall type.
- Manufactured in accordance with ISO 9001 quality system.
- Double sealing on the blade to ensure full tightness.
- Damper casing tightness class C according to EN 1751.
- Damper closing test performed at 15 m/s duct velocity.
- Possible to be equipped with manual or electric actuator.

Dimensions

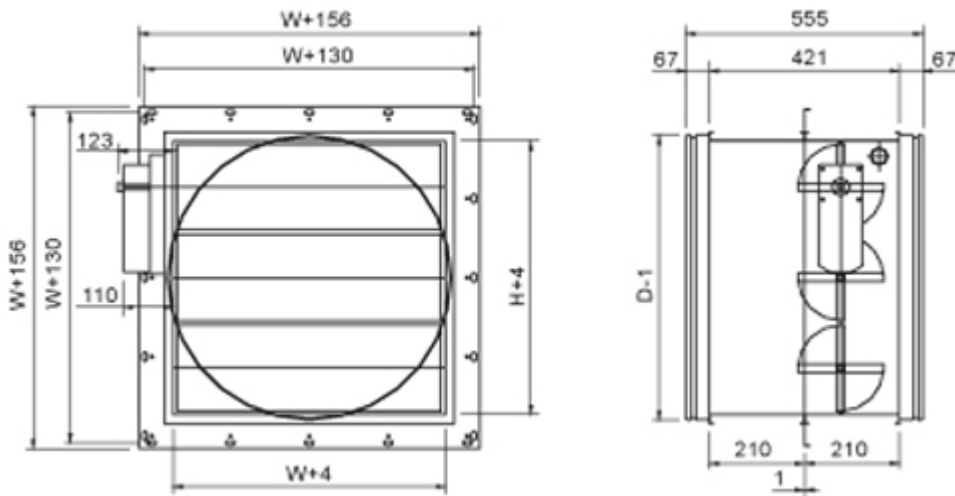
Rectangular connections



H/W	200 – 800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
200	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
300	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
350	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
400	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
450	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
500	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
550	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
600	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
650	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
700	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
750	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
800	X	H	H	H	H	H	H	H	H	H	H	H	H	H	H
850	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
900	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
950	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1000	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1050	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1100	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1150	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1200	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1250	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1300	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1350	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1400	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1450	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–
1500	V	–	–	–	–	–	–	–	–	–	–	–	–	–	–

V Vertical blade direction only
H Horizontal blade direction only
X Both horizontal and vertical blade direction allowed

Circular connections



D	H	W
630	600	600
800	800	800

Material

Part	Material	Note
Casing	Galvanised steel	–
Blade(s)	Galvanised steel	–
Blade gaskets	Ceramic cloth	–
Installation frame	Galvanised steel	–
Duct gaskets	Rubber compound	Circular connections

Accessories

Accessory	Code	Description
Fuse	FU	Thermal release at 72 °C
Mesh on one side	N1	Galvanised steel, 10×10 mm Installed on actuator side
Mesh on both sides	N2	Galvanised steel, 10×10 mm
Damper casing extension	CE	Length 210 mm, for structural thickness >200 mm
Limitswitch	MS	Closed position indication

The manual fire damper can be equipped with a bipolar limit switch (L2), which indicates the closing of the shutoff blade. The limit switch has potential-free points (no = normally open and nc = normally closed), which can be used to control other fire dampers equipped with an electric release, e.g., triggering an alarm in the fire suppression system. Electric actuator (BF) has integrated two limit switches. The maximum operating voltage and current is 400 V, 10 A.

Actuators

MA Manual actuator, spring return

B1 BF24-T-2 operating voltage AC/DC 24 V (72 °C) 18 Nm, with limitswitchs

B2 BF230-T-2 operating voltage AC 230 V (72 °C) 18 Nm, with limitswitchs

Manual actuator

Manual actuator has to be opened by hand and closes the fire damper when fuse release the spring.

Electric actuator

A fusible link releases and cuts off operating voltage to the spring-return motor, allowing the spring to close the damper blades.

Function

The Halton FDS is a rectangular fire damper, which prevents fire and smoke from spreading in ventilation ducts. Approved fire resistance classes are (EN 1366-2 and EN 13501-3):

- Ceilings: ES 60
- Walls: ES 60, E 90 (both concrete/masonry and lightweight walls)

The fire damper is equipped with an electrical or manual actuator.

Under all options, a fuse responds to a rise in temperature, causing a spring-return blade to close. Alternatively, the damper may be released by a system using an electric actuator.

Setting of the damper is performed from outside the device.

The fire damper is made of incombustible materials. Once the fire damper has closed, the blade(s) and sealing close the duct tightly, effectively preventing the spreading of flue gases.

Actuators have a visual position indicator.

The nominal release temperature of the fuse with an electric actuator is 72 °C.

The Halton FDS fire damper can be connected to the Halton Safe Management 2.0 (SM2) control

and testing system. The Halton Safe Management 2.0 system enables the use of smoke detectors in ductwork or in rooms. The Halton FDS fire damper also can be connected to common building automation systems.

Installation

The damper may be installed both on concrete or masonry walls and ceilings and on lightweight walls. The blade direction in wall installation may be either horizontal or vertical.

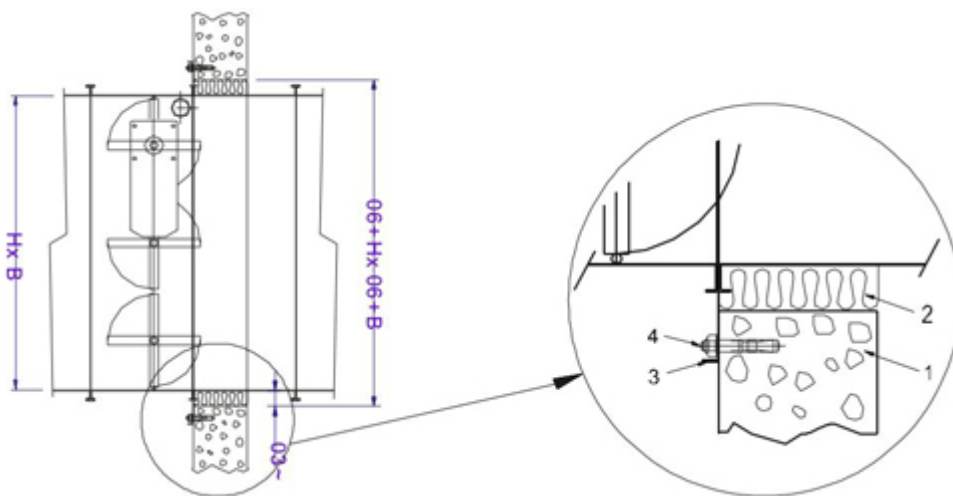
The correct operation of the fire damper must be ensured before and after installation.

Set the fire damper by turning the shut-off blade to the open position.

The damper is to be cleaned after installation.

Detailed installation instructions, as well as an installer's installation certificate form, are supplied with each product. See also the section Documents for detailed installation guidance.

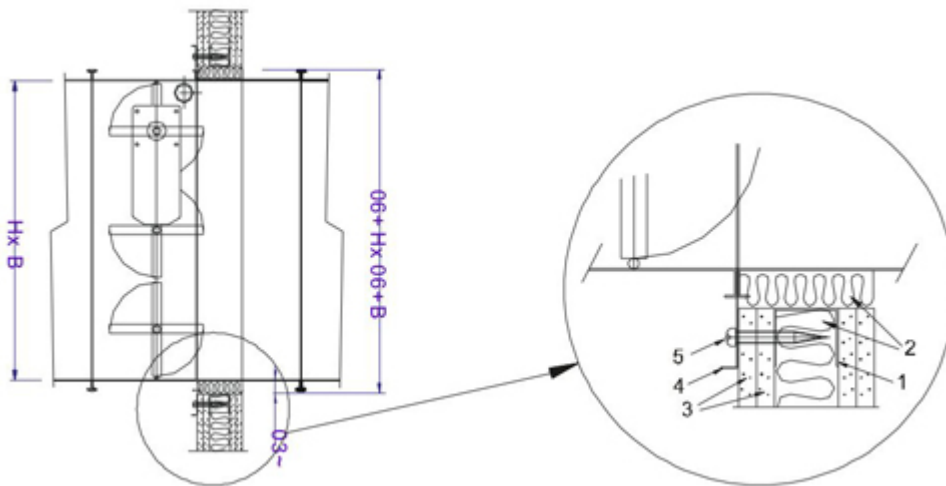
Installation in concrete and masonry walls



Installation opening: product size + 60 mm in both horizontal and vertical direction

1. Concrete or masonry wall
2. Rock wool, specific weight min. 40 kg/m³.
3. Installation flange
4. Anchor screw

Installation in lightweight wall



Installation opening: product size + 60 mm in both horizontal and vertical direction

1. Installation frame; steel or wood
2. Rock wool, specific weight min. 40 kg/m³.
3. Plasterboard
4. Installation flange
5. Self drilling screw

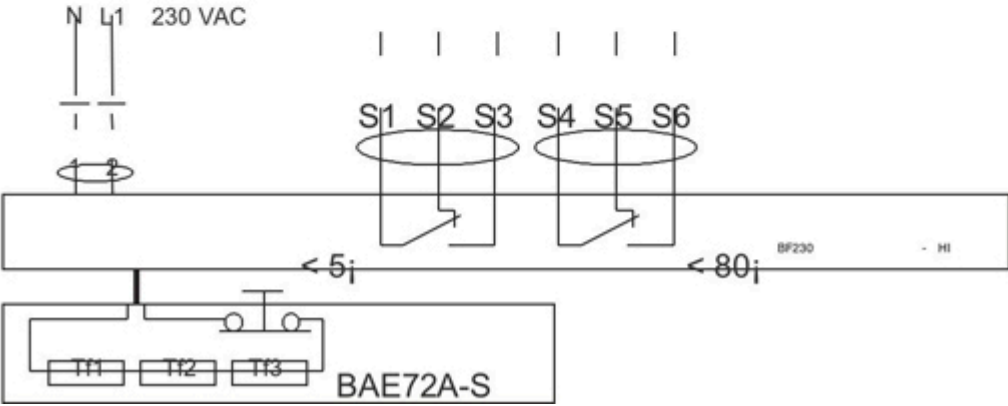
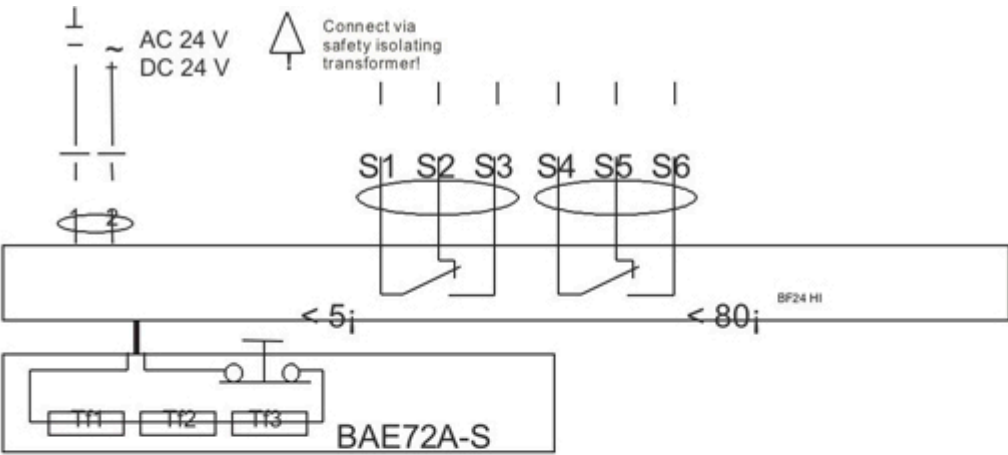
An opening is always left in the separating element for the fire damper; the size of the installation opening is about $W + 60 \text{ mm} \times H + 60 \text{ mm}$.

A supporting frame shall be installed around the opening of the lightweight wall.

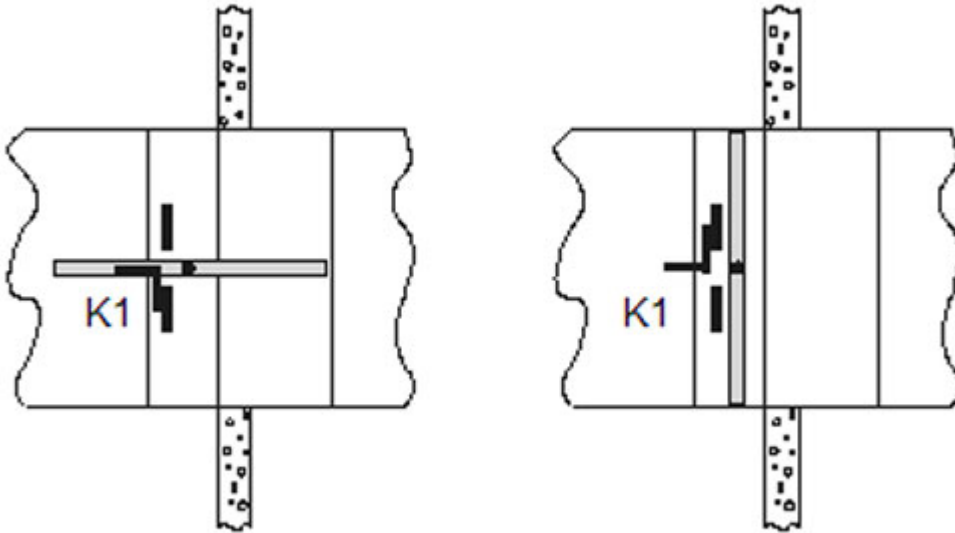
All products come with an installation flange, which is used to fasten the fire damper with screws to the concrete surface or to the supporting frame within the lightweight wall (see installation drawings).

The gap between the damper and the separating element is filled with non wool after fixing of the damper.

Electric actuator wiring diagram



Manual actuator wiring diagram (limit switch, MS)



Fire damper open
K1: 13/14 closed
21/22 open

Fire damper closed
K1: 13/14 open
21/22 closed

Servicing

In case the fuse of a manual fire damper is gone off, it can be reset after the fuse temperature has fallen below the release temperature. If the shutoff blade does not lock, the fuse is worn out and must be replaced. The fuse can be changed from outside the fire damper.

The fuse of a fire damper equipped with an electric actuator must be replaced if the fuse has been released because of a rise in temperature.

To ensure proper operation of the fire dampers, they should be inspected regularly. It is recommended that the fire damper be connected to automatic control and testing system Halton Safe Management 2.0 (SM2) for electric actuator 24 V.

Dampers not connected to an automatic testing system shall be tested periodically. The minimum recommended inspection period is twice a year or according to building code.

An inspection opening shall be installed in the proximity of the fire damper as indicated in the building code (not part of the product).

Upon failure during testing of the fire damper, maintenance service shall be ordered from an

authorised Halton representative, to ensure appropriate operation of the product.

Specification

Multi-blade-type fire damper Halton FDS for rectangular and circular ducts. The casing and blades of the fire damper is made of galvanised steel and the blade gaskets made of incombustible material.

The fire damper is CE marked according to the standard 15650:2010 for both separating concrete or masonry walls and ceilings and installation in lightweight walls according to EN 1366-2 with **E 90** (v_e) C 50 ; **E 60** (v_e – h_o) S C 50 ; **EI 15** (h_o) S C 50 fire resistance. The fire damper is approved for wall installation in both horizontal and vertical blade direction.

The fire damper is installed on a separating wall by screws without the need for an additional installation frame or grouting.

The fire damper includes a position indicator.

The blade shafts can be installed in either horizontal or vertical orientation, and the actuator can be installed in any direction.

In the manually operated model, the fuse activation temperature corresponds to the specification, 72 °C.

The fire damper is equipped with a thermal fuse. According to specification, the damper is supplied with one of the following release options:

- A.** Manual model have to open by hand and closes the fire damper when fuse release the spring
- B.** Electrical actuator model.

A fusible link releases and cuts off operating voltage to the spring-return actuator, allowing the spring to close the damper blades.

Order Code

FDS/S-W-H-D; RE-FU-ZT

S = Type of duct connections

R Rectangular connections

C Circular connections

W = Width (mm)

200, +50, ..., 1500

H = Height (mm)

200, 300, +50, ..., 800

D = Connection size (circular connection)

630, 800

Other options and accessories

RE = Release type

- MA Manual actuator (spring release)
- B1 BF24-T-2 (72 °C) 18 Nm
- B2 BF230-T-2 (72 °C) 18 Nm

FU = Fuse release temperature [°C]

- 72 72 °C

AC = Accessories

- CE Casing extension 210 mm (for structural thickness > 200 mm)
- MS Limit switch
- N1 Safety mesh, 1 side (installed on actuator side)
- N2 Safety mesh, 2 sides

ZT = Tailored product

- N No
- Y Yes (ETO)

Code example

FDS/R-200-200, RE=B1, FU=72, AC=N1, ZT=N